Project Name: Advance Snake Game
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Describing the project:

Our project based on the original snake game adding some other features to promote users' interests. One special is that users are able to use both keyboard and mouse to control the direction and shoot the turret at the same time. There are ten lives at the beginning and game will be over at zero lives. Besides, instead of just eating the food, which is the blue square, we aim to increase the difficulty by popping up some pink turrets to shoot the snake.

Ideas about designing the project:

The main inheritance that we used is pygame.sprite.sprite. Then, we split the game into several subclasses like head, body, food, turret, scoreboard, bullet and so on. All of these classes are created in the setup file and in the Game file, we have both keyboard and mouse control, the highest score saving position, frequency of enemy and food occurrences and function call.

Trouble along the way:

When we talked about our progress, instructor suggests us to add the mouse control in our project. At first, we have no idea how to use mouse to change snake's direction. However, then we decide to build a coordinate axis to estimate---if the x>y, it should be either right or left and then compare the x to the (0,0) if x<0, snakes will turn left, otherwise, turn right. Same idea for up and down.

Discoverers you made:

We just know a little about the pygame.sprite.sprint in the class, but when we search the resource online, we realize how sprite class easily works, used as a base class for the objects in our pygame. In addition, there are lots of things needing to be updated while users play the game. For example, the life you lost or earn, the length of the snake and so on. Therefore, we figure out how to use update function to automatically replace the original number to improve the effectiveness.

Reflection of the project:

This final project is a great opportunity to start creating our own game and could be eventually played by any users. When do the coding stuff, we must have clear ideas about the whole frame and what we need for each small part. It would be better to work together as a team since there will be more brilliant ideas to improve the quality of the game and the efficiency

Problem your final project has:

Since our project is based on the original snake game, it will be difficult to add some new feature to enhance users experience. We think providing some bullet and laser attack are still not enough to increase their interests. Thus, in the future, we will try to come up some attracting functions adding in this game and update the content frequently.